## PATENT ABSTRACTS OF JAPAN

(11) Publication number:

2001-184507

(43) Date of publication of application: 06.07.2001

(51)Int.CI.

G06T 7/00

A61B 5/117

G01N 21/17

(21)Application number: 11-366238

(71)Applicant: HITACHI LTD

(22) Date of filing:

24.12.1999

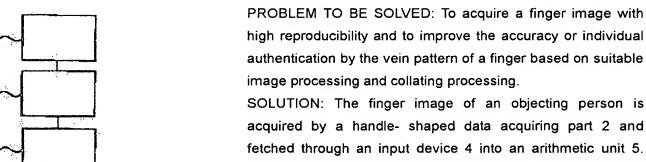
(72)Inventor: KONO MIYUKI

**UMEMURA SHINICHIRO** YAMAMOTO ETSUJI KAWABATA KENICHI

## (54) DEVICE FOR AUTHENTICATING INDIVIDUAL

21

(57)Abstract:



acquired by a handle- shaped data acquiring part 2 and fetched through an input device 4 into an arithmetic unit 5. Concerning the finger image, directional filtering processing to become integration-like processing in the long-axis direction of a finger, which is the main running direction of a blood vessel, and to become differentiation-like processing in the orthogonal short-axis direction is applied and authentication is performed by comparing the image with the Registered finger image data of that person himself registered in a storage device 6. Thus,

by making the objecting person grasp the handle-shaped data acquiring part having a curvature, the image data of plural fingers can be acquired with high reproducibility, further, a non-uniform background is removed from the finger image by directional filtering processing, an image intensifying a blood vessel image usable for the arithmetic of authentication can be provided and high- accuracy individual authentication is enabled.